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An update on trends in catch of Pacific salmon in Canada

by

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INTRODUCTION

Six species of Pacific salmon are harvested in British Columbia coastal waters. Sockeye, pink, and chum salmon are mainly harvested in commercial net fisheries while chinook and coho salmon are targeted by commercial, troll, and (increasingly) by sport fisheries located primarily in the Strait of Georgia. Steelhead constitute a minor component of the catch, and are not discussed in this document.

In general, escapement goals are established in Canada for major sockeye, pink, and chum stocks, and fisheries are managed to meet these escapement objectives. Chinook and coho fisheries are managed to achieve specified harvest rates although escapement goals have also been established for key stocks.

This document reports data on the changes in catch (numbers and total weight) for the five major salmon species caught in British Columbian waters for the period 1952-1997.

Catch Trends

The 1997 Catch was 47,312 tonnes or roughly two thirds of the average catch of 64,911 tonnes for the period 1952-1997. More than half the 1997 catch was composed of sockeye (24,603 tonnes). The sockeye catch was above the average for the period 1952-1997 but slightly below average for this cycle year since the regime shift in 1977. The 1997 pink catch of 11,923 tonnes was well below the long term average catch of 20,360 tonnes for the odd-year cycle. Chum salmon catch was 8,649 tonnes and was also below the long term average catch of 13,363 tonnes. Chinook salmon production has decreased steadily since the early 1970's and the 1997 catch of 1475 tonnes was the third lowest on record and only about 30 percent of the long term average catch of 5,208 tonnes. Coho salmon catches in 1997 were severely depressed at 663 tonnes and were well below the long term average catch of 8,847 tonnes.

Depressed levels of both coho and chinook salmon production resulted in catch restrictions in both 1997 and 1998. Conservation concerns have resulted in no directed fisheries for coho in 1998 and harvest restrictions on fisheries that intercept coho salmon. Thus, only incidental catches of coho salmon are anticipated in 1998. Catch data for 1998 are very preliminary but the expected catch is anticipated to be less than that in 1997 both as a result of decreased production as well as the curtailment of a number of fisheries as special conservation initiatives.

Total catch by weight and numbers is reported in Tables 1 and 2 for the period 1952-97. Table 3 and 4 provides a breakdown of salmon catch by major statistical area in 1997 by weight and numbers.

FIGURES

Fig. 1 a,b. Major statistical reporting areas for Pacific salmon catches in British Columbia.

Table 1 Total Salmon Catch (numbers) by species in British Columbia 1952 - 1997

	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>
52	806565	4887820	2966502	11416033	2645107	22722027
53	888674	5920709	2972600	11213961	4885694	25881638
54	781715	6964746	2558586	5617362	6535427	22457836
55	717912	2835625	3039628	11427728	1632816	19653709
56	748858	3257452	3049662	7351861	2458288	16866121
57	720679	3033987	3136839	11310116	2412105	20613726
58	813240	12047521	2989288	6908186	3191765	25950000
59	770738	3254309	2896886	6776401	2015339	15713673
60	593482	2857635	2030207	4097540	1836758	11415622
61	512608	4564717	3297302	8304983	1217512	17897122
62	517925	3499193	3625679	23428633	1496001	32567431
63	803247	2085976	3421397	12201446	1463240	19975306
64	965186	3619050	4148485	9628385	2252798	20613904
65	981091	3019510	4443095	5109269	633143	14186108
66	1164642	4020471	5411764	17261355	1310722	29168954
67	1129839	6749885	3318203	9846051	1130035	22174013
68	1082726	6345805	5262190	20248961	3095039	36034721
69	1099993	4267739	2407299	2570508	1310461	11656000
70	1212368	4078274	3945433	13601475	3680227	26517777
71	1593252	6306007	4788842	8455992	1262977	22407070
72	1548849	3562689	3355852	13996264	6031462	28495116
73	1423792	7585778	3530197	6521341	6225042	25286150
74	1466846	7225360	3693968	7373961	2201804	21961939
75	1411706	2271494	2331676	4633607	1147184	11795667
76	1543060	4813793	3698416	10348865	1901061	22305195
77	1492516	6346302	3316546	10356377	1088184	22599925
78	1367868	7221754	3349967	10748013	2978708	25666310
79	1329230	5691342	3646858	11822526	866324	23356280
80	1476408	3260096	3835871	8418658	3452751	20443784
81	1331589	8443091	3138642	18085803	1122961	32122086
82	1365458	10074474	3588233	2679553	2974848	20682566
83	1154668	5523728	4534183	24000538	1005661	36218778
84	1424876	5081199	4048203	7500864	1850797	19905939
85	1137642	12250917	3681122	20319522	5492723	42881926
86	1019717	10557884	5479257	17980804	5581417	40619079
87	937419	5424675	4027972	13446962	2302062	26139090
88	892440	4490092	3835265	23131194	6194142	38543133
89	847471	13796395	3977130	17174907	1828401	37624304
90	859345	14242568	4522247	17268954	3146630	40039744
91	855936	10467706	3742379	24275731	2364147	41705899
92	881621	8339244	3645070	10321920	4029580	27217435
93	827351	18258281	2748680	10300434	4231334	36366080
94	577904	11615700	2877718	2225908	4344478	21641708
95	302040	4498270	2015330	11904179	2478259	21198078
96	162403	5950797	1568143	5893763	1370493	14945599
97	327700	10734384	369281	6610693	1892578	19934636

Table 2 Total Salmon Catch (tonnes) by species in British Columbia 1952
- 1997

	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>
1952	5828	13965	8892	23200	14452	66338
1953	6379	16029	9570	27901	24686	84565
1954	5551	21319	8586	11673	33747	80875
1955	5129	7549	9768	28624	8245	59315
1956	5544	9751	10531	13125	12441	51391
1957	5079	7130	9349	25840	12355	59753
1958	5828	33571	10140	15308	17283	82131
1959	5540	8172	8085	15601	10481	47878
1960	4248	7017	5827	7672	9214	33978
1961	3719	12063	10209	22464	6623	55079
1962	3712	9107	10952	42281	8186	74238
1963	4147	5376	10465	27079	6991	54058
1964	5485	10397	12967	16532	10847	56229
1965	5151	7350	15040	10310	3014	40864
1966	6176	11636	15889	33064	6965	73730
1967	6254	16732	9296	22721	5514	60517
1968	6205	18921	13813	25583	16645	81168
1969	5755	10877	7114	5993	6073	35813
1970	5915	11240	12484	23710	16748	70097
1971	7669	17039	12640	17202	5410	59960
1972	7387	9467	9429	17653	29925	73861
1973	6692	21413	10146	12936	32644	83831
1974	6721	21276	9264	11061	12465	60786
1975	6436	5635	7091	9961	5380	34502
1976	6841	12295	8283	16869	10913	55200
1977	6693	17328	8798	23759	6013	62591
1978	6987	21813	8139	15221	15804	67964
1979	6080	14343	9137	23406	4723	57690
1980	5893	8054	8225	13766	17358	53296
1981	5244	20950	6688	36861	6137	75881
1982	6341	28980	8224	3933	15055	62533
1983	4786	14197	9173	38720	4890	71767
1984	5509	12792	8779	11695	8978	47753
1985	4865	31062	7971	36546	23479	103924
1986	4486	29811	11666	29264	24922	100148
1987	4622	14714	7357	25865	11037	63596
1988	5218	11842	6155	31467	30205	84887
1989	4698	33674	7704	29593	9288	84956
1990	4642	35861	9221	25615	16846	92186
1991	4538	24525	8733	34130	10203	82129
1992	4731	20785	6370	14563	17953	64403
1993	4301	41797	3764	15328	17167	82357
1994	3180	29777	6760	3277	20315	63309
1995	1381	10463	4226	18920	11939	46930
1996	505	15454	3371	8350	6478	34158
1997	1475	24603	663	11923	8649	47312

Table 3 1997 Salmon Catch (tonnes) by Statistical Area*

<u>AREA</u>	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>
1	408	1,246	373	1,213	330	3,570
2E	105	7	32	4	231	379
2W	96	367	33	74	18	588
3	45	1,584	21	1,196	551	3,396
4	130	3,075	88	960	274	4,527
5	25	56	18	56	30	185
6	37	20	19	220	51	348
7	26	3	21	45	230	326
8	31	87	28	794	1,073	2,013
9	0	0	0	0	0	0
10	2	1	1	7	4	16
11	1	261	2	25	4	293
12	11	10,101	16	4,429	424	14,980
13	4	3,455	1	1,801	178	5,438
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	0	292	0	166	2	460
17	0	0	0	0	0	0
18	0	5	0	6	1	13
19	0	0	0	0	0	0
19A	0	0	0	0	0	0
19B	0	0	0	0	0	0
20	2	709	1	578	2	1,292
21	0	0	0	0	4,753	4,753
22	0	0	0	0	0	0
23	128	114	0	9	0	252
23A	0	0	0	0	0	0
23B	0	0	0	0	0	0
24	7	2	0	5	0	14
25	24	1	0	3	384	413
26	94	1	0	1	0	96
27	60	3	0	3	1	66
28	0	0	0	0	0	0
29	196	3,056	2	327	106	3,686
30	0	0	0	0	0	0
C	0	0	0	0	0	0
Taku	23	66	7	0	0	96
Stikine	19	90	1	0	1	112
Unknown	0	0	0	0	0	0
TOTAL	1,475	24,603	663	11,923	8,649	47,312

Table 4 1997 Salmon Catch (number) by Statistical Area*


	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>	
	1	56532	489514	131434	638821	82401	1398702
2E		13888	3444	11366	2329	50406	81433
2W		11308	168833	10801	45063	4674	240679
	3	6536	582907	6987	585020	119633	1301083
	4	18001	1126879	29494	491623	62199	1728196
	5	3619	20407	6009	28043	6784	64862
	6	5252	8931	6715	134707	11866	167471
	7	3649	1288	6966	27651	56130	95684
	8	3396	31583	8879	427111	234808	705777
	9	5	0	83	1	5	94
	10	237	675	492	4719	1106	7229
	11	124	117054	461	14418	790	132847
	12	1996	4700442	5756	2506550	74299	7289043
	13	12205	1570665	1565	984685	28656	2597776
	14	16080	717	886	2253	94	20030
	15	3173	301	215	660	14	4363
	16	4582	128819	178	87438	340	221357
	17	3215	843	236	582	0	4876
	18	954	2947	825	6022	256	11004
	19	0	0	0	0	0	0
19A		138	0	0	96	0	234
19B		13532	6648	99547	84933	368	205028
	20	3934	303073	5918	344328	422	657675
	21	10	96	6	84	1047410	1047606
	22	0	0	0	0	0	0
	23	25627	52200	7	6056	64	83954
23A		11506	36525	529	0	0	48560
23B		20429	810	18988	0	0	40227
	24	5538	1133	8491	3562	19	18743
	25	21964	779	1576	2200	89117	115636
	26	14543	406	0	544	38	15531
	27	8610	1318	35	2638	193	12794
	28	1752	289	795	565	13	3414
	29	30386	1322751	1683	177734	20237	1552791
	30	0	0	0	0	0	0
C		0	0	0	0	0	0
Taku		2692	23433	2005	0	0	28130
Stikine		2287	28674	353	257	236	31807
Unknown		0	0	0	0	0	0
TOTAL		327700	10734384	369281	6610693	1892578	19934636

Figure 1 a

READ CAREFULLY

1. Reporting of all catches to the Dept. of Fisheries and Oceans is the responsibility of the fisherman and a condition of licence renewal.
2. Accurate catch reports must include the map number or numbers showing the area in which your fish were caught.
3. The statistical areas shown on this map are to be used as a guide only. For more exact information refer to the Pacific Fishery Management Area Regulations.

- Dept of Fisheries and Oceans Office
 - Statistical areas
 - Surfline
- Note: All areas revised February 1985

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STATISTICAL AREA MAP

SHOWING AREAS OF CATCH FOR
BRITISH COLUMBIA WATERS
SOUTHERN HALF

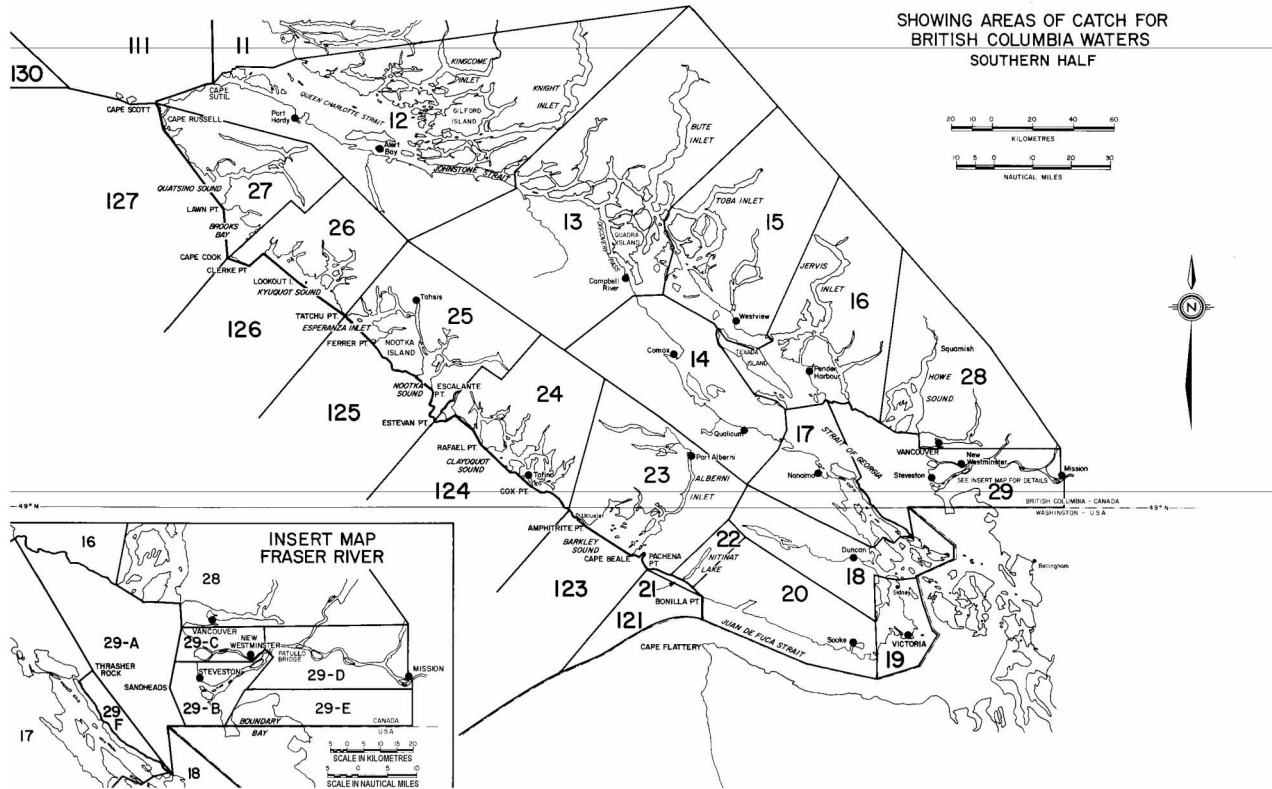


Figure 1 b

